

REMARKS

Claims 1, 4-18, 20-24, and 26-39 are pending in this continuation application. The final rejection made in the parent case is respectfully traversed, and the pending claims are submitted to be patentable over the prior art of record cited in the parent case (USSN 10/731,619 filed 12/9/03) for the reasons described below.

Sole independent claims 1 and 38 have been limited to a simulated archery bow capable of firing an arrow. In addition, Claims 1 and 38 now require: 1) a mobile data capture unit with a camera and range finder; 2) a mobile display screen; and 3) the use of a momentum suppression device providing back-pressure to the bow string upon release of the drawn string substantially commensurate to that which an arrow imports when actually fired from the bow. For the Examiner's convenience, potential rejections of the revised claims, based on the prior art cited in the parent case, are discussed, and it is shown that the pending claims should be allowed.

In particular, each of primary references Golubic, Richardson and Swenson fails to disclose a momentum suppression device for a bow and arrow, to simulate back-pressure provided when a drawn bow is released and the mass of the arrow takes flight, as explained in more detail below.

Golubic and Richardson

Golubic and Richardson would not be obviously combined to form the present invention. Golubic discloses an apparatus and method for determining and recording the impact of projectiles discharged from a simulated hunting apparatus, such as a rifle or the like (Col. 2: 32). The simulated hunting apparatus has a sighting mechanism and an image recording unit housing (Col. 4: 5-9). The housing includes a trajectory-calculating

microprocessor unit which is attached to the firearm (Col. 4: 9-13). Suppression of recoil (momentum suppression) is not simulated on the firearm; rather these factors may be input into the trajectory-calculating microprocessor unit to provide more accurate impact approximation (Col. 8: 52-55). Richardson teaches a sport simulation system which displays a simulated launched projectile following a calculated trajectory (Paragraph [0014]). Richardson discloses an archery simulator to be in the related field of the invention (Paragraphs [0005-0006]). The system that tracks the projectile is stationary, comprising a projectile-tracking region and multiple digital cameras (Paragraphs [0040-0041]). The system displaying the projectile is similarly stationary, mounted within a protective enclosure having external connectors to enable the computer to be coupled to the digital camera (Paragraph [0046]).

The Examiner in the parent case combines these references, Golubic and Richardson, and found the present invention unpatentable under USC 103(a). The Examiner suggested the teachings of Richardson would have been combined with Golubic to provide the user of the present invention with an image of the simulated launched projectile on the display screen and a hunting simulation using a bow and arrow.

Respectfully, there is nothing in Golubic and Richardson that is obviously combined to form the present invention. When determining the patentability of a claimed invention which combines two known elements, the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *See In Re Dennis Rouffet*, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998). Golubic discloses a simulated hunting apparatus with a mobile data capture and display device; however, it fails to utilize a simulated momentum suppression device or

teach the use of a bow and arrow. Richardson teaches the use of a bow and arrow; however, it does not disclose a mobile capture device or a momentum suppression device. Golubic is of a completely different subject matter as a whole than Richardson because the data capture and display devices are not similarly oriented and only Richardson teaches a bow an arrow. Further, the present invention has a simulated momentum suppression device, which is not taught in either Golubic or Richardson.

Swensen and Garthe

Respectfully, Swensen and Garthe should not be combined to form the present invention. Swensen discloses an archery simulation system (Paragraph [0028]). The system comprises a bow and a rod that is an "arrow emulator." The rod in Swensen is propelled into the piston when the bow is shot (Paragraph [0028]). This generates a mechanical wave that causes the piston to vibrate. The vibrations generate a trigger signal that causes a laser beam to be projected from the bow (Paragraph [0033]). This laser beam hits the target and the responses are sent back to the shooter via computer (Paragraph [0033]). Swensen discloses nothing about momentum suppression simulation by the "arrow emulator." Garthe discloses a "pre-loaded" archery bow and method comprising a hollow cylindrical tube with a piston (Col. 2: 7-20). The mechanism in Garthe makes the bow and arrow easier to load and fire for the user.

With the present invention, the "momentum suppression rod" is meant to simulate an arrow while providing sufficient drag/back force to make simulation firing more realistic by providing simulated recoil. Swensen and Garthe are not properly combined as Swensen teaches the use of a rod for measuring the force of a projectile and Garthe teaches the use of a rod for assisting in the safety of the actual use of bow and arrow.

There is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. See *In Re Dennis Rouffet*, 149 F.3d at 1355-56 *supra*. Here, neither patent suggests a need or desirability for the patent claimed features of a simulated bow and arrow with a mechanism providing back-pressure on the bow for a realistic simulated launch of a projectile.

Swensen and Bergstrom

Respectfully, Swensen and Bergstrom should not be combined to form the present invention. Bergstrom discloses a recoil reducing buffering device for firearms employing an explosive charge (Col. 1: 20-25). It utilizes a counter-recoil apparatus employing a pneumatic-cylinder to absorb the shock to the gun structure (Col. 1: 25-30). Bergstrom teaches a piston-rod assembly which may employ compound telescopic configurations (Col. 5: 30-43; Col. 13: 56 – Col. 14: 10; Figs. 7A-B), a configuration useful in apparatuses where longitudinal space is small for the recoil-spring relative to the distance of recoil travel (Col. 13: 56-60).

In the parent case, the Examiner combined Swensen and Bergstrom. However, Swensen teaches an archery simulation system that utilizes an arrow emulator (which when shot, generates a signal causing a laser beam to be projected on a computer screen without providing physical feedback [Paragraphs 0028 and 0033]), while Bergstrom teaches a recoil device on a firearm (specifically one that “explodes”). The present invention, by contrast, is directed to a simulated bow and arrow, providing realistic recoil simulation. Swensen and Bergstrom do not suggest this claimed combination. Bergstrom involves the use of an actual fire arm, while Swensen involves the use of a

simulation bow and arrow. Those of ordinary skill would not have been lead to combine such disparate references.

CONCLUSION

For the foregoing reasons Applicant respectfully requests an allowance of pending Claims 1, 4-18, 20-24, and 26-39. The final rejection made in the parent case is respectfully traversed, because the pending claims are patentable over the prior art of record cited in the parent case (USSN 10/731,619 filed 12/9/03) for the reasons described above.

Respectfully submitted,

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